

LISTING OF THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Claims 1-21 (cancelled)

22. (New) A planar direct drive, comprising:

a passive unit, which includes a planar running surface with magnetic flux regions;

an active unit with coil systems for generating a variable magnetic flux;

a bearing unit, which allows frictionless two-dimensional relative motion of the active and passive units by maintaining a bearing gap;

a position measuring system that includes a measurement standard and a measuring sensor that scans the measurement standard and supplies a position signal, the positioning system including a moving component and a quasi-stationary component, one of which is formed by the measurement standard, while the other is formed by the measuring sensor, such that both components are arranged outside the bearing gap and a distance from the running surface, the quasi-stationary component being arranged at a predetermined fixed point and substantially parallel to but separated from the running surface, the moving component being mounted on the active unit so that when the moving component reaches the quasi-stationary component the moving component comes into measuring contact with the quasi-stationary component, and the position control of the active unit being controlled or regulated by evaluation of the position signal supplied by the measuring sensor as long as the two components of the position measuring system are in a state of measuring contact.

23. (New) The planar direct drive in accordance with claim 22, wherein the quasi-stationary component is arranged outside of a range of travel required by the coil systems of the active unit and is vertically displaced from the running surface.

24. (New) The planar direct drive in accordance with claim 22, wherein the quasi-stationary component is mounted on frame members and has a permanently fixed position relative to the passive unit.

25. (New) The planar direct drive in accordance with claim 22, wherein the quasi-stationary component is mounted on a second active unit, which can move relative to the passive unit and relative to the first active unit and can be moved to the predetermined fixed points.

26. (New) The planar direct drive in accordance with claim 22, wherein the quasi-stationary component is integrated in a fixed module, whose position in the plane of the passive unit is fixed by at least one mechanical securing device mounted on the passive unit, and at least one holding magnet is integrated in the fixed module so as to hold the fixed module on the running surface of the passive unit.

27. (New) The planar direct drive in accordance with claim 26, wherein the mechanical securing device comprises a stop bar, which is located at an edge of the passive unit and is rigidly mounted on the frame, and several mounting pins that engage the stop bar and the fixed module, the holding magnet comprising at least one electromagnet.

28. (New) The planar direct drive in accordance with any of claim 22, wherein several quasi-stationary components are arranged at several fixed points that are separated from one another.

29. (New) The planar direct drive in accordance with claim 28, wherein the fixed points are formed by several work modules that are mounted on the passive unit.

30. (New) The planar direct drive in accordance with claim 22, comprising several active units that can move on the common passive unit, each of the active units has a moving component and/or a quasi-stationary component.

31. (New) The planar direct drive in accordance with claim 22, wherein the moving component is arranged in an externally accessible area with vertical displacement from the coil systems of the active unit.

32. (New) The planar direct drive in accordance with claim 31, wherein the moving component is mounted with vertical displacement from a workpiece holder mounted on the active unit.

33. (New) The planar direct drive in accordance with claim 32, wherein the moving component and the workpiece holder constitute a structural unit, which is replaceably connected with the active unit.

34. (New) The planar direct drive in accordance with claim 22, wherein the active unit has a holding frame, which is arranged parallel to the active running surface of the active unit, and in which a support plate is replaceably positioned, such that the moving component is arranged in a plane between the coil systems of the active unit and the support plate.

35. (New) The planar direct drive in accordance with Claim 34, wherein the moving component is formed by a flat measurement standard, which is mounted on an underside of the support plate.

36. (New) The planar direct drive in accordance with claim 35, wherein the measurement standard is a cross-grating plate, whose parallel misalignment with the active running surface of the active unit is less than 50 μm .

37. (New) The planar direct drive in accordance with claim 34, wherein the holding frame and the support plate contain alignment devices, which interact by forces of magnetic attraction to position the support plate in a predetermined position in the holding frame.

38. (New) The planar direct drive in accordance with claim 37, wherein the alignment devices consist of several permanent magnets and opposing magnetizable aligning pins, which are inserted in the holding frame or in the support plate, respectively.

39. (New) The planar direct drive in accordance with claim 22, wherein the measuring sensor is an optical or magnetoresistive sensor.

40. (New) The planar direct drive in accordance with claim 22, and further comprising a global measuring system, by which movement of the active unit is controlled as long as the two components of the position measuring system are not in measuring contact.

41. (New) The planar direct drive in accordance with claim 22, wherein the active unit is operative to move in step operation as long as the two components of the position measuring system are not in measuring contact.

42. (New) The planar direct drive in accordance with claim 22, wherein the bearing unit is an air bearing.